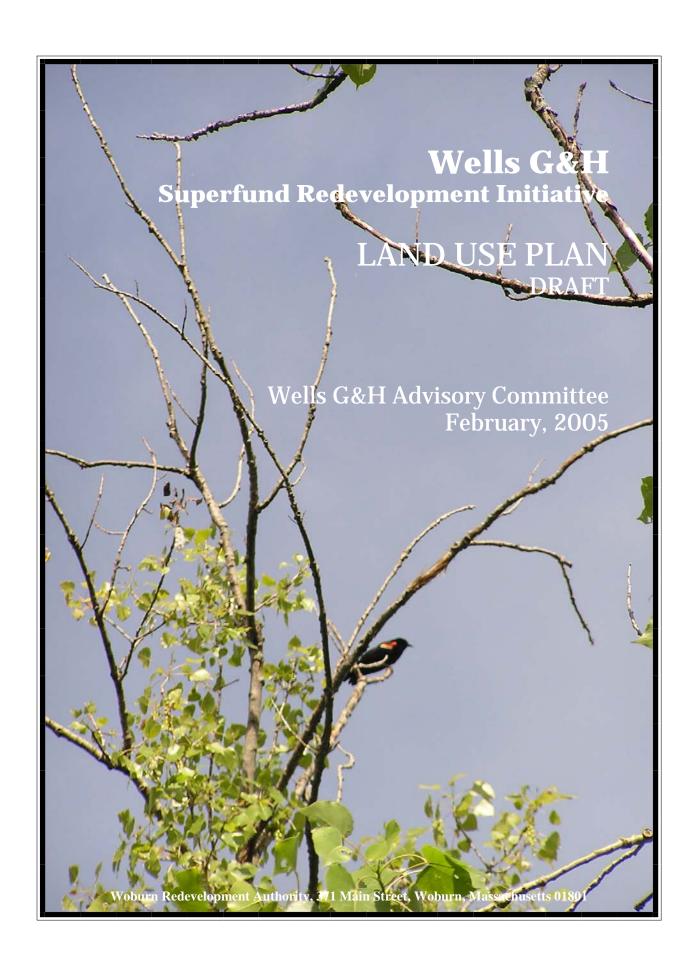
APPENDIX 6N

WELLS G&H SUPERFUND REDEVELOPMENT INITIATIVE LAND USE PLAN - FEBRUARY 2005 DRAFT



City of Woburn

John C. Curran, Mayor

Wells G&H Advisory Committee

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David Gill

Marie Price (W.R.E.N.)

Property Owners

Christopher Moran, Clean Harbors, Inc.

Jeffrey Lawson (Project Control Companies, PRP Rep.)

Marc Knittle, Cummings Properties, Inc.

Agencies

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James Garvey, Woburn Planning Board

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Wells G&H Superfund Redevelopment Initiative

LAND USE PLAN DRAFT

Wells G&H Advisory Committee February, 2005

Woburn Redevelopment Authority, 371 Main Street, Woburn, Massachusetts 01801

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WELLS G&H ADVISORY COMMITTEE RECOMMENDATIONS

- 1. Zoning and Land Use Regulation: After a careful review of the zoning and other local land use regulations which effect the Wells G&H Superfund Area, and the traffic and other impacts of various types of development, the Wells G&H Advisory Committee has concluded that the Woburn Zoning Ordinance does not require amendment in order to further the land use goals of this Wells G&H Land Use Plan. In particular, zoning as it effects the commercial parcels located along Washington Street between the entrance to Rt. 95/128 and Salem Street should not be amended to allow for retail development.
- 2. Infrastructure Improvements: The Wells G&H Advisory Committee supports the effort by the City of Woburn Engineering Department to design and fund the widening of Washington Street between Rt. 95/128 and Salem Street, in order to increase capacity and better regulate vehicular access from abutting properties. The Committee further recommends that the Massachusetts Highway Department incorporate the reconstruction and widening of the Washington Street/Rt. 95 overpass in any future design for the reconstruction of the Rt. 93/Rt. 95 Interchange.
- 3. Wells G&H City-Owned Properties: The City-owned properties which lie along the Aberjona River have the potential to provide a valuable natural resource for public open space and passive recreation for the people of Woburn, provided that the public who enter the site can be adequately protected from the risk of exposure to hazardous contaminants. The Wells G&H Advisory Committee recommends that the U.S. Environmental Protection Agency conduct additional sampling and testing of surficial soils in the upland area around Wells G and H, to ensure that no deposition of dangerous levels of arsenic or other COCs have occurred over time in the areas planned for public access. The Wells G&H Advisory Committee also supports the EPA's continued effort through the full application of the established Superfund regulatory process to develop and implement appropriate mitigation measures for the high levels of arsenic already identified in the Aberjona shoreline sediments in the vicinity of Well H. This remediation is a prerequisite for the use of the Wells G&H City-owned parcels for public open space and passive recreation.
- 4. W.R. Grace Property: It is clear that the combined effects of environmental stigma and the current economic climate have made the reuse and redevelopment of the W.R. Grace property at 369 Washington Street problematic. However, given the prime location of the parcel within the region, the Wells G&H Advisory Committee believes that the best long-term reuse of the site from the perspective of both the City and the private sector would be for hotel or prime office use. Access to the site should be exclu-

sively from Tower Park Drive. The Advisory Committee recommends that the City of Woburn and the Commonwealth of Massachusetts take steps to encourage this land use outcome, including the provision of relief from the three-story height limit through the issuance of a special permit, the construction of the above-mentioned infrastructure improvements, and the provision of Tax Increment Financing to support appropriate redevelopment. The Advisory Committee also recommends that the W.R. Grace Company consider working in partnership with the Woburn Redevelopment Authority to further the successful redevelopment of the property. The future developer of the W.R. Grace site should be encouraged to work with the abutting property owner to create a private frontage road providing direct alternative access between Cedar Street and Tower Park Drive.

5. Aberjona Auto Parts/Southwest Properties: The property at 280 Salem Street, the former Aberjona Auto Parts, lies in an important location along the southern edge of the Wells G&H Superfund Area, immediately adjacent to the Aberjona River. The Wells G&H Advisory Committee supports the proposal by the current owner to construct a ice-skating rink on the property, with a design which minimizes the impacts upon the riverway as much as possible. The Committee recommends strongly against the reinstatement by the Woburn City Council of a Class 3 Auto-Recycling license for the site, now or at any time in the future. In general, the Southwest Properties may in the longer term be an appropriate area for consideration by the Woburn Redevelopment Authority and the City of Woburn as an urban development project under MGL Chapter 121B.



1. INTRODUCTION

In September, 2000, the City of Woburn was awarded a \$55,000 grant from the U.S. Environmental Protection Agency's Superfund Pilot Redevelopment Initiative Program (SRI), to complete a Comprehensive Land Use Plan for the Wells G&H Superfund Area, the contaminated site in East Woburn at the center of a major environmental controversy over the last twenty years, which has brought national attention to the City of Woburn. The EPA grant was matched by a \$45,000 contribution from three of the companies which have been identified by the agency as Potentially Responsible Parties (PRPs), including W.R. Grace Company, Beatrice Foods, Inc., and Unifirst Corporation.

Under the scope of work of the SRI, the Woburn Redevelopment Authority, acting on behalf of the City of Woburn, has completed an extensive planning effort and prepared this Land Use Plan, which will help to guide the City in the development of future land use policies and economic development, infrastructure, and open space initiatives in the Wells G&H Area. The activities proposed in this plan will complement and build upon the ongoing environmental mitigation efforts of both the EPA and the private sector.

The specific goals of this project, as stated in the original application, were as follows:

- a. To determine reasonable future uses for municipal parcels and adjacent properties which are currently impacted by contamination from multiple PRP's located within the Site;
- b. To ascertain the evolving status of cleanup activities conducted by the EPA or PRPs, (and) understand the technical basis for proposed cleanup methods, (to) allow widespread participation in decisions effecting land use of the site;
- c. To determine the feasibility of increasing opportunities for the public enjoyment of open space represented by the municipal parcels within the site;
- d. To develop local strategies which will support and encourage the private reuse and redevelopment of parcels according to the land use goals to be established under the Plan.

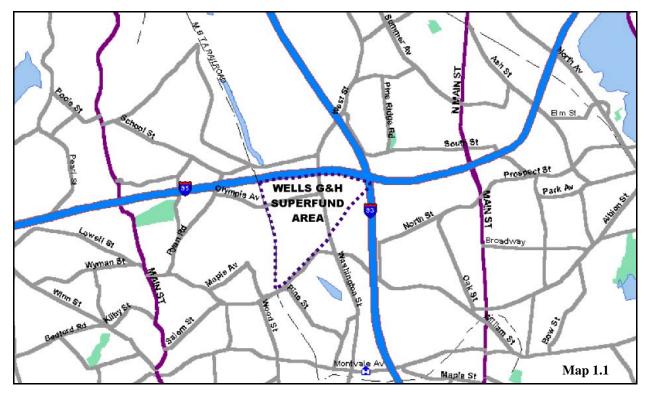
In June, 2001, after an extensive solicitation process, the WRA retained the

firm of Environmental Science Services, Inc., of Wellesley, Massachusetts, to provide environmental and land use consulting for the project. An advisory committee of nine individuals was appointed by the Mayor in November, 2001, to advise and oversee the planning effort. Three of the advisory committee members are residents of the surrounding area, three represent area property owners (including one who represents three of the responsible businesses which have executed consent decrees with the EPA), and three are representatives of municipal boards (the WRA, the Woburn Planning Board, and the Woburn Conservation Commission). The Committee held six meetings between December, 2001, and September, 2002, reviewing the work of both the WRA staff and the consultant, and provided general guidance as the components of this Comprehensive Plan were developed. At the final meeting of September 2002, Wells G&H SRI Advisory Committee decided that it was important to await the results of the EPA's Aberjona River Study Baseline Human Health and Ecological Risk Assessment Report before finalizing the SRI Land Use Plan.

The original release of the Aberjona River Risk Assessment had been anticipated for the following month. However, the final draft of the Risk Assessment was not released for public comment by the EPA for another year. When it was released, this report revealed test results for arsenic in the river sediments located in the vicinity of Well H which exceeded 3,000 ppm, as well as excessive levels of other chemicals of concern. These readings caused serious concern among the members of the Committee and the public at-large. ESS, the WRA's environmental consultant, had reviewed the various recreation and open space proposals for the Cityowned property, generated during the months of meetings, based upon earlier less alarming test results, which had been provided by the EPA and other sources prior to the completion of additional testing done specifically for the Aberjona River Baseline Risk Assessment (BRA). The new results seemed to contradict the basic environmental assumptions which had underpinned the entire discussion of potential land uses for the City-owned parcels.

The Advisory Committee met again in June, 2004, after an 18 month hiatus, to consider the ramifications of the new Risk Assessment information. At the meeting it was determined that the preferred use for the City-owned Wells G&H property still remains open space/passive recreation, but the Committee also decided that the recommendation must remain tentative until the full impact of the new information could be determined. ESS was then instructed to review in detail both 1) the Risk Assessment report itself, or at least that part which pertained to the reuse of the City-owned property, and 2) public comments regarding the draft Risk Assessment submitted by other parties, incluiding especially the critique of the report completed under another EPA grant for the Aberjona Study Coalition by Cambridge Environmental, Inc. The results of that review have been incorporated into this draft Land Use Plan. The determination that open space/passive recreation remains the preferred use for the City-owned Wells G&H property, but is subject to the completion of further testing within the upland area, and a review of the final remediation actions to be proposed by the EPA for this area.

1. Background: The Wells G&H Superfund Redevelopment Pilot Site is located to the immediate southwest of the junction of Washington Street and Route 128, which is designated I-95 in the federal interstate highway system. This location is just one exit south of the intersection of Route 128 and I-93, one of the busiest interchanges in New England. The site contains approximately 330 acres, made up of a variety of individual parcels both publicly and pri-



vately-owned. The Aberjona River flows though the site near its western edge; much of the land immediately flanking the river is wetland.

At the heart of the site are three municipally-owned parcels, containing two municipal wells which until closed due to contamination in 1979, provided as much as 30 percent of the community's drinking water. At that time, approximately 200 abandoned 55-gallon drums containing industrial waste were discovered near the wells, many of which had leaked their contents into the soils and groundwater. A community group was formed, For A Cleaner Environment (FACE), to push for public action.

In 1980, the U.S. Environmental Protection Agency (EPA) began a testing program to identify the nature and sources of groundwater contamination. Groundwater in the site area was found to be contaminated with volatile organic compounds (VOCs), including trichloroethylene (TCE) and tetrachloroethylene (PCE). Soils were found to contain VOCs, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and pesticides. Sediments in the Aberjona River were contaminated with PAHs, and with heavy metals. Five potentially responsible parties (PRPs) were initially identified: WRA Grace and Company, Unifirst Corporation, Wildwood Conservation Trust, New England Plastics, and Olympia Nominee Trust. The entire site was placed on the National Priorities List in 1982.

In 1990, the EPA executed a consent decree with four of the five PRPs, W.R. Grace, Unifirst Corporation, New England Plastics, and Wildwood Conservation Trust (Beatrice Corp). The EPA divided the site into three Operable Units (OU): OU-1, the Source Areas, addressing primarily soils; OU-2, the Central Area, which addressed primarily groundwater contaminated by source areas; and OU-3, the Aberjona River, including sediments and adjacent wetlands. The last PRP, the Olympia Nominee Trust, executed a consent decree with the EPA in March, 2003.

The abandoned drums of contaminated material were removed and disposed during the 1980s. In 1991, after extensive testing, comprehensive clean-up activities began, including extensive soil removal and disposal, and pumping and treatment of groundwater. These long-term treatment programs are still underway. The preparation of the Wells G&H Comprehensive Land Use Plan has given the City of Woburn a unique opportunity to take a greater role in the long-term destiny of the site, by providing the vehicle for the City to more aggressively guide land use and development in the area, within the positive context established by the EPA's remediation leadership.

2. **Project Strategy:** The Wells G&H Superfund Area, located at the what is perhaps the busiest interchange in New England, is theoretically in an ideal location within the regional real estate economy. This locational advantage offers enormous potential for a successful reuse/redevelopment strategy.



However, the stigma and perceived risks associated with being a designated Superfund Site exerts an opposing influence, so that a positive land use outcome for the community is far from assured. The adoption of a proactive Land Use Plan will hopefully guide the course of economic events towards a positive community outcome, and lead to the development and application of tools which will assist in overcoming both real and perceived obstacles.

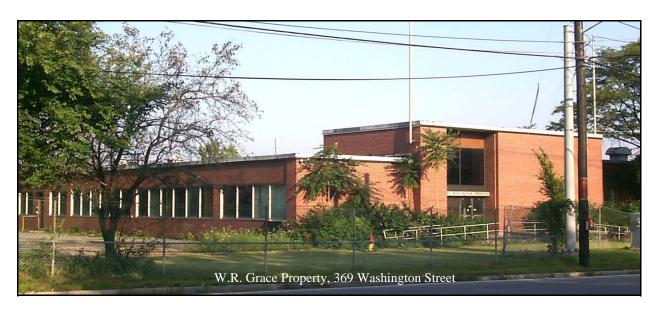
The overall SRI project strategy recognizes that to be able to develop a pragmatic, proactive land use plan, a number of important principals must be recognized and adhered to. These are summarized below:

- a. The planning process must be inclusive: The successful implementation of any land use strategy depends upon the close cooperation of all of the interested parties. In order to accomplish this, the entire planning process is centered around the deliberations of the Wells G&H Advisory Committee. The individual committee meetings, held at key benchmarks in the planning process, served to focus the professional staff and consultant to produce within the schedule. By genuinely involving a broad representation of stakeholders through the Committee mechanism, a greater proprietary stake in the outcome was achieved, and cooperation and support during implementation is more assured. In addition, committee members, both during and after the conclusion of deliberations, continue to be the project's most effective ambassadors to the community at large.
- b. Existing environmental data and analysis is sufficient: After decades of testing, and years of actual cleanup, any additional sampling or even new in-depth analysis of existing data by the City or the WRA would be duplicative. Therefore, it was not a part of the strategy of this Pilot Project to reevaluate the remediation decisions of either the EPA or the PRPs.

However, what was critical for the identification of preferred land use outcomes was an adequate and comprehensive review and understanding of the very substantial testing, analysis, and remediation activities already completed, underway, or planned by the EPA or others. Within the limited time and budget, not all of the mountains of documentation generated over decades could be reviewed, or reviewed in equal detail. Instead, the cooperation of key EPA and DEP project staff was obtained to identify key reports and other documentation critical to an understanding of the history, decision making, and status of the ongoing remediation effort. The Environmental Status Report, prepared by ESS Group, Inc., is provided in Section 3 of this Plan.

- c. The land use objectives must be pragmatic: The SRI Project work program emphasized that before preferred land uses could be identified, a thorough understanding of the environmental and economic parameters which realistic limit those uses must first be gained, not just by staff or consultants, but by the participating Advisory Committee as well. Nothing could be accomplished by proposing land uses which are virtually impossible, or even improbable, because of environmental conditions or economic realities. Public incentives or subsidies can help accelerate and guide a preferred outcome, but some land uses, no matter how desirable, may never be feasible.
- 3. Project Management Structure: The Superfund Redevelopment Pilot Project was managed by the Woburn Redevelopment Authority, through the cooperative community development services agreement which has been executed between the City of Woburn and the WRA. This agreement establishes the WRA as the Community Development Agency for the City. The WRA Executive Director was directly responsible for project administration; the Executive Director is in turn supervised by the five member Board of the WRA, four of whom are appointed by the Mayor, and one by the Governor. The agreement between the WRA and the City of Woburn is supervised by the Mayor's Office, which establishes priorities and provides general direction to the WRA.

Under the work program, the WRA staff completed the land use, zoning, market, and similar analyses which were among the research tasks. The WRA was also directly responsible for or-



ganizing the Advisory Committee, and providing staff support for its meetings. The WRA retained the services of an outside consultant team, which was responsible for completing the environmental review, the traffic/utility review, and the preliminary concept plans for priority parcels selected by the Advisory Committee. The Consultant assembled an experienced project team, which included an environmental scientist, a traffic planner, and a landscape architect/ urban designer. Coordination with the EPA, Mass. DEP, and other relevant agencies was the direct responsibility of the WRA.

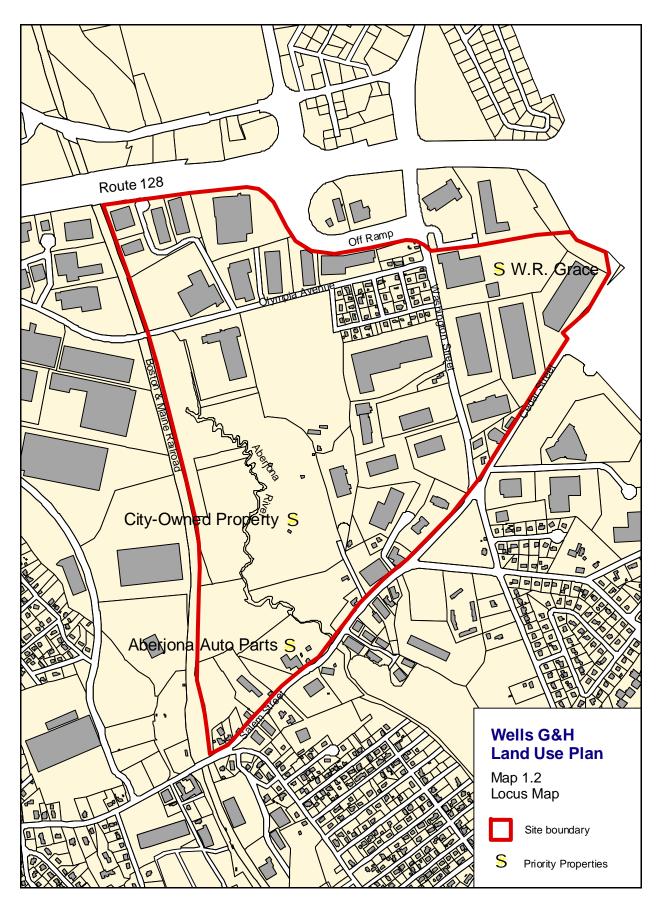
- **4. Project Tasks/Sub Tasks:** In order to complete the extensive research and evaluation effort needed to successfully prepare the Comprehensive Land Use Plan, the SRI work program was divided into a number of specific tasks. These specific tasks provide the conceptual framework for the organization of the Plan, and the individual working papers, reports, and other work products the basic content. A summary of each task is provided below:
- a. Organization of Superfund Pilot Project Advisory Committee: The first task of the Superfund Pilot Project was the solicitation and selection of the outside environmental/land use consultant to assist in the research and evaluation effort. The Request for Proposals for the environmental consultant was prepared by the WRA and advertised in January, 2001. After an extensive outreach process undertaken by the Authority, the WRA Board selected the firm of Environmental Science Services, Inc., to complete the consulting tasks.

Once the research team was established, the next step was the organization of the Advisory Committee, which was to be made up representatives of the residential neighborhoods and commercial businesses in and surrounding the site, and other stakeholders identified and appointed by the Mayor prior to the first meeting.

In June, 2001, the Mayor and the WRA finalized an overall structure for the Wells G&H Advisory Committee. It was agreed that that the Mayor would appoint a nine-member committee. Three members would represent public boards: the WRA, the Planning Board, and the Conservation Commission. Three members would represent Woburn residents, two from the neighborhoods in the vicinity of site, and one from elsewhere in the City, to provide a community-wide perspective. The WRA Executive Director was instructed to consult with Woburn's recently organized environmental group, Woburn Residents' Environmental Network (WREN), for suggestions to fill the latter slot. Three members would represent area property owners, including one selected by the participating PRPs. Through the Summer and Fall of 2001, a recruitment effort was undertaken to identify interested individuals to serve in the various positions on the Committee. In November, the Mayor formally appointed all nine members of the Wells G&H Advisory Committee.

The WRA was responsible for hosting and coordinating the Advisory Committee meetings. A total of six meetings were held at specific benchmarks in the work program. In preparation for each meeting, a an information package was assembled by the WRA to assist the Committee members in preparing for the meeting. These are provided in Adobe PDF format on the enclosed CD.

b. Preliminary Data Mapping: The SRI Project used the City of Woburn's Geo-



graphical Information System (GIS) to map, display, and analyze the land use, market, and environmental information and data assembled under the various project tasks. An important early task was the preparation and updating of the GIS system files, and the mapping of the readily available property data from local sources, in particular the data available from the Woburn Assessing Department. This property database containes ownership information, current land use, total area of buildings and land, and other basic site property information. The data was assembled into a database format (dbf) which could be directly linked to the City's GIS mapping system. This Assessing data represents the most up to date information available regarding the status of properties within the Site boundary.

The City's map files for each GIS layer were updated with information obtained from a review of plans and permit information obtained from the Inspectional Services Department. The GIS layers were corrected where necessary to reflect the most recent property information. The WRA also obtained GIS map files from MassGIS, the state program for assembling and distributing statewide geographic information, and incorporated those map layers into the project system. This MassGIS data included contours and surface geology, streams, wetlands delineation, flood plains, acquifers, and other relevant information. Most of these maps were incorporated in the various working papers prepared by the WRA and ESS Group or its subconsultants, and some are included within the text of this draft Land Use Plan. The complete working papers can be found in the Advisory Committee Information Packages prepared by the WRA for each committee meeting, which are included in full in Adobe PDF format on the CD which is enclosed with this plan.

c. Environmental Remediation Review: This was the first of several tasks completed by the ESS Group, Inc. For the first meeting of the Advisory Committee, ESS Group assembled and provided a detailed summary of the available information regarding the types and degree of contamination within the project site, and the remediation activities which have been planned, designed and/or implemented. This task utilized existing reports and other documentation; no new environmental testing was undertaken under this work program. in order to complete the work, the Consultant's environmental planner reviewed all of the major reports available from the EPA, Mass. DEP, the City of Woburn, or the individual PRPs which have executed cooperative agreements with the EPA or DEP. After reviewing the reports in detail, the environmental planner interviewed the appropriate staff of the U.S. EPA, Mass. DEP, and the PRPs, to determine the current status of remediation for each of the five properties identified as having contributed to the contamination of the Site. This included the status of the design, construction, and implementation of all remediation measures, and the latest results of monitoring tests which have been completed.

Based upon the research above, the ESS Group environmental planner prepared a detailed Environmental Status Report which presented the site history and contamination/remediation status of each parcel, and evaluated how the current status will effect the various alternative land use or redevelopment options for each parcel and the adjacent parcels. Among the critical options reviewed by the report was the opening of the City-owned parcels to passive recreational use. Following the release of the EPA's Aberjona River Study Baseline Human Health and Ecological Risk Assessment Report in October, 2003, and the release of subsequent public comments received by the EPA in response, ESS completed a review of the new documentation and comments, and prepared a second report, looking specifically at the issue of contamination in the

vicinity of Wells G&H. The results of both reports are summarized in detail in Section 3 of this Land Use Plan, and are provided in full in Adobe PDF format on the enclosed CD.

d. Zoning/Land Use Trend Analysis: The Zoning Ordinance of the City of Woburn, and the related site plan and subdivision requirements, represent the codification of the land use policies of the City. In this task, the WRA completed a review of all of the relevant local ordinances and regulations, in order to both establish the overall parameters of reuse, and to ensure that the current panoply of regulations would serve to support the broad community goals for the area, and the specific properties eventually identified as priority parcels. The WRA reviewed in detail the Woburn Zoning Ordinance, and other relevant subdivision, site plan and environmental requirements, such as wetland regulations, and evaluated the impact upon reuse or redevelopment of the most important vacant or underutilized sites. The WRA identified recent development projects in and around the SRI area, and other historical information through a review of the files of the Inspectional Services Department, in order to help determine the likely reuse or redevelopment which could be feasible and achievable.

The WRA completed a development trend analysis of the commercial parcels within the Superfund Area, to assist the Advisory Committee in identifying sites with substantial reuse potential. The WRA identified existing or possible land use conflicts, particularly between adjacent residential and commercial uses. The Zoning and Land Use Working Paper has been incorporated as Section 2 of this Plan. The complete working paper can also be found in the Information Package for the Committee's meeting of December 5, 2001, provided in the Adobe PDF format on the enclosed CD.

Using the land use data and information prepared by the WRA and ESS Group, the Advisory Committee selected three priority sites within the SRI Area for further analysis and planning. For each priority site, the Advisory Committee suggested and proposed several alternative development scenarios, for further evaluation by the planning team. The City-owned parcels, which include Wells G&H, was automatically included within this parcel list and was analyzed to determine the feasibility of opening up and improving access to the area for passive recreation use. The three priority sites were:

- W.R. Grace Company, 369 Washington Street;
- Aberjona Auto Parts, 280 Salem Street; and,
- City of Woburn Wells G&H Open Space.
- e. Market Analysis: In order to determine the feasibility of a proposed land use strategy for the two privately-owned priority parcels, the planning team and the Committee explored the broad market context of any possible new development or reuse, and the financial feasibility of such development given the status and limitations of the two privately-owned priority parcels. In this task, market and development cost data was assembled by the WRA to provide the economic context of this Land Use Plan, and to create financial projections for each parcel.

As part of that process, the WRA undertook interviews of real estate professionals with experi-

ence in and around the Superfund Pilot project area, to establish current development cost and income data for the financial analysis. Development costs included the environmental remediation costs, where appropriate. The interviews also included questions which solicited opinions or projections regarding absorption rates, price trends, target markets, and other factors affecting the market and development potential of the privately held priority parcels in the Superfund Pilot site. The WRA also reviewed existing regional economic forecasts/trends to establish the regional economic context of any proposed development within the SRI site. All of this information was incorporated into the Market Analysis Working Paper, Financial Analysis Working Paper, which was distributed and reviewed by the Advisory Committee. The analysis is incorporated in the sections dealing with the priority parcels. The full report is also included found in the Information Package for the Committee's meeting of June 5, 2002, provided in the Adobe PDF format on the enclosed CD.

f. Traffic/Utility Analysis: In order to properly evaluate the potential land uses for each of the subject parcels, it was also critical to examine the capacity and issues related to the public infrastructure which serves the area encompassed by and surrounding the Superfund Site. The project site is bordered on the east by Washington Street, and on the north in part by Route 128. This corridor has experienced an intractable traffic congestion problem, due to the limits of the capacity of Washington Street, and geometric problems related to moving traffic between the two major arteries. These traffic congestion problems must of necessity effect the identification of the optimal land uses of underutilized project area sites, and lead ultimately to the incorporation of traffic mitigation measures in the Land Use Plan, as part of the overall strategy. Also critical was the assessment of other public infrastructure, most notably the capacity and related issues surrounding the water and sewage systems which serve the project site and its environs.

As with the environmental review, described above, no new data collection was undertaken under this task. Instead, the traffic sub-consultant, Vanesse, Inc., prepared a summary and synthe-



sis of existing traffic studies and proposals which had been prepared and filed by consultants in recent years, as part of local or state development reviews of private development projects in and around the SRI area. This included Washington Street, Salem Street, Cedar Street, Olympia Avenue, Montvale Avenue, and Rt. 128 at Washington. The traffic sub-consultant also interviewed both MassHighway District 4 traffic engineers, and local officials, regarding capacity, congestion, and safety issues, and both short and long term plans for traffic improvements.

Based upon the information obtained from the above research, the traffic planner prepared a summary report in three draft memoranda, detailing the traffic issues and proposals above, specifically considering the factors which may effect or limit the feasibility of reuse or redevelopment of vacant or underutilized parcels in the project area. These memoranda are compiled to create Section 4 of this Plan, and can also be found in their entirety in the Information Package for the Committee's meeting of February 13, 2002, provided in the Adobe PDF format on the enclosed CD. The final VAi memorandum added hotel use to the other uses considered in the first three, after the Committee decided, through the land use discussions which were held during the early meetings, that the use could be well suited for the W.R. Grace site, providing jobs, tax base, and economic return, with relatively less impact upon the surrounding area,

g. Concept Plans: Once the Advisory Committee established the short list of priority sites within the SRI Area, and proposed alternative scenarios for each development, the consultant prepared preliminary concept plans for each alternative, in order to test and graphically depict the build-out scenarios for each parcel. The consultant's land use planner visited each of the priority parcels, to verify in the field any site conditions which would effect the reuse or development potential of the site. The visual inspection verified wetlands locations, surface drainage, excessive slope, or any other feature which could effect build-out, or which could adversely impact adjacent parcels following redevelopment.

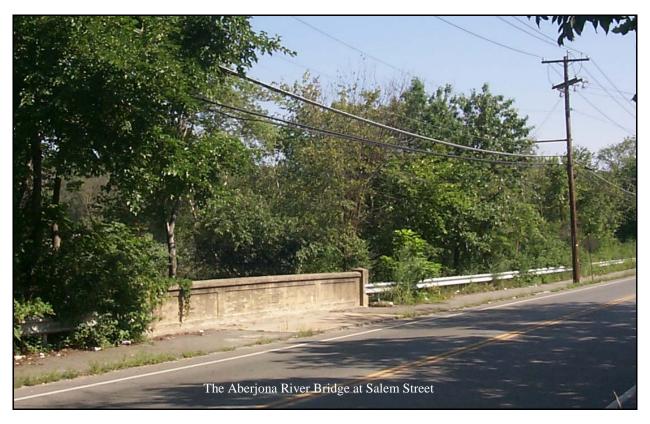
One of the preliminary concept plans depicted alternative active and passive opens space scenarios for the City-owned Wells G&H parcel. These preliminary concept plans depicted streets, water bodies, wetlands, wooded area, existing and proposed building outlines, parking and circulation, and open space. Each priority site was assessed as to its capacity and existing environmental values, identifying the need to:

- Conserve the biodiversity which exists or is in the process of being reestablished on the site:
- Prevent land degradation by minimizing disturbance;
- Preserve waterways and wetlands;
- Protect areas of high visual quality; and,
- Maintain adequate natural drainage and catchment areas.

All of the preliminary concept plans were thoroughly reviewed by the Advisory Committee at subsequent meetings, and were revised by the consultant based upon the review comments. During the course of the deliberations, one of the priority sites, the site of the former Aberjona Auto Parts at 280 Salem Street, was acquired by a new owner, who presented to the Committee a proposal and site plan for the new construction of a public skating rink on the site. This pro-

posal was endorsed by the Committee, and the site plan incorporated into the evaluation effort.

- h. Financial Analyses: With the completion of the concept plans, the WRA also prepared preliminary financial analyses for several of the proposed redevelopment options for the two privately-owned priority parcels. To complete this task, the WRA identified and reviewed with the Committee a list of possible sources of public support, and projected the impact upon the feasibility or likelihood of realizing the redevelopment objectives. This list included sources for 1) open space funding, which could be used to create improved public access to the City-owned parcel, 2) funding for the design and construction of recommended public infrastructure improvements, and 3) incentives or financing for the reuse or redevelopment by private sector developers. Among the options explored was the possible preparation of an urban renewal plan under Ch. 121b, to stimulate the redevelopment of the so-called Southwest Properties, along Salem Street.
- i. Preparation of Superfund Pilot Land Use Plan: The culmination of all of the previous tasks was the preparation of this draft Land Use Plan. This plan incorporates the detailed property information, environmental condition and status, land use trends, infrastructure needs and proposed improvements, and the proposed redevelopment or reuse scenarios recommended by the Advisory Committee. This initial draft will be thoroughly reviewed through the solicitation of direct comments from relevant stakeholders and public officials, including two local community groups, the Aberjona Study Coalition, and the Woburn Residents Environmental Network. The WRA and the Advisory Committee will also hold a public hearing to receive public comment regarding the contents and recommendations of the Land Use Plan. This hearing will be advertised in a newspaper of general circulation two weeks prior to the hearing.



Following the public hearing and the individual plan review, the Advisory Committee will recommend any final revisions or additions to the Land Use Plan. The WRA will then prepare a final Wells G&H Comprehensive Land Use Plan, for approval by the Mayor and City Council.



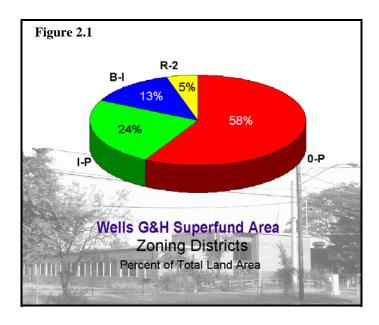
2. ZONING AND LAND USE REGULATION

In Massachusetts, the responsibility for regulating and guiding the use of land by owners lies primarily with local municipalities. The principal way this is accomplished is through the adoption, amendment and enforcement of local zoning ordinances by the local city or town. All communities in Massachusetts have such ordinances, which are governed by the requirement of Massachusetts General Laws Chapter 40B, the Zoning Act. In addition, a number of other local, state, and federal statutes and regulations also effect land use, including river and wetlands protection laws, traffic mitigation and curb cut regulations, etc. This discussion reviews the existing universe of such requirements, and seeks to provide answers to the following base-line questions regarding the zoning and other regulations which govern and direct land use in the Wells G&H area:

- How does the Woburn Zoning Ordinance and the requirements of other state and local regulations effectively guide and limit development within the Superfund area;
- To what extent are properties within the Superfund currently at the maximum build-out permitted under current regulations, or are currently below allowed capacity; and,
- What, if any, changes in zoning or other local land use regulations
 does the Advisory Committee recommend, in order to bring local
 regulation into harmony with the proposed land use objectives for
 the Wells G&H area.
- The Zoning Districts: There are four zoning districts represented in the Wells G&H Superfund Area. These are displayed on the map on the following page, along with the zones represented in the surrounding areas. The O-P (Office Park) district is the most significant in the Wells G&H Area, representing 58 percent of the total land area. The O-P Zone includes most of the area east of Washington Street, and West Cummings Park and the other commercial development located between Washington Street and the City-owned Wells G&H property along the Aberjona River. Overall, there is approximately 4.7 million square feet of building space within this O-P zoned area. The I-P (Industrial Park) District is also significant, representing just under one-quarter of the area. This includes the commercial/industrial development between Route 128 and Olympia Avenue, and the auto repair and similar uses spread out along the north side of Salem Street between the MBTA Right-of-Way and the entrance to the Massachusetts Rifle Association. Approximately 507,000 square feet of building space is located in the I-P zone.

In contrast, the B-I (Business Interstate) and R-2 (Single/Two Family Residential) Districts together represent under one-fifth of the Wells G&H Area.

The Business Interstate zone is located adjacent to the Washington Street overpass at Route 128, and includes several auto and marine sales and service businesses. This area is essentially an extension of the B-I zone located to the north of Route 128, which includes the Woburn Mall. This area includes about 266,000 square feet of building space. The R-2 zone, located just south of the B-I zone, is a small, six block area of approximately 40 homes, surrounded by industrial and commercial uses on three sides, and the Massachusetts Rifle Association on the fourth.

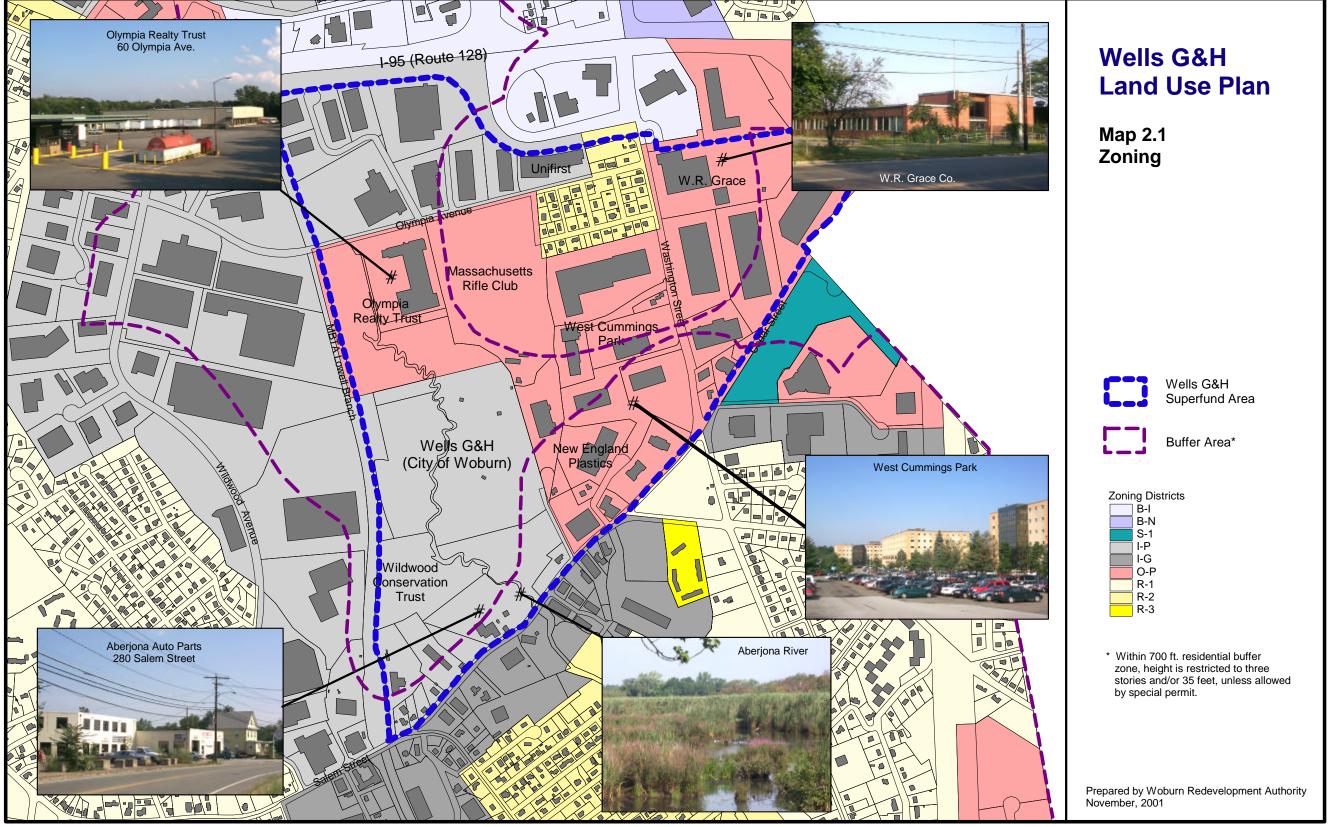


a. Allowed and Prohibited Uses: A fundamental purpose of local zoning is to segregate as much as possible conflicting land uses, in order to minimize situations which would directly jeopardize public safety, such as having a trucking terminal locate in a residential neighborhood. Zoning also attempts to provide protected areas where certain desirable uses can be encouraged, for example, by guaranteeing to an office developer that his/her new first-class office development will not someday have a slaughterhouse or other detrimental use as a neighbor. Woburn's Zoning Ordinance is certainly designed to accomplish this overall purpose. In practice, the complex provisions of any ordinance are the subject of more or less continual debate, revision, and refinement, based upon changing circumstances and perceived real-world outcomes.

Table 2.1 displays in column form the most important land uses which are allowed or prohibited in each of the four zoning districts represented in the Wells G&H Superfund Area. Note that this is a summary of the information found in Section 5 of the Woburn Zoning Ordinance, and no distinction is made between uses which are allowed by right, and those only allowed by special permit. For complete information, one must consult the ordinance itself. The discussion in the succeeding paragraphs highlights the most salient uses for each zone.

Not surprisingly, the *Office Park* district allows for all types of office use, business services, hotel, and research and testing (the ordinance's use category which most closely describes research and development, or R&D). The O-P district also allows light manufacturing, though it specifically excludes printing and publishing, a use sometimes considered to be light manufacturing in the ordinances of other communities. Light manufacturing is defined by the zoning ordinance as follows:

Fabrication, processing, packaging, or assembly operation employing only electric or other substantially noiseless and inoffensive motor power, utilizing hand labor or quiet machinery and processes, and free from agents disturbing to the neighborhood, such as odors, gas fumes, smoke, cinders, flashing or excessively



bright lights, refuse matter, electromagnetic radiation, heat or vibration.

No residential use is allowed in O-P; also prohibited are retail uses, hospitals, fast food restaurants, automobile sales and service, heavy manufacturing, and wholesale warehouse and distribution. A category which is allowed in the O-P zone is "business sales and service." Not defined in the zoning ordinance, this use category in past decades was interpreted by City zoning officials to include those retail stores which could successfully argue that they served a substantial business clientele as well as the general public, such as the CompUSA and Staples stores at 335 Washington Street. Business Sales and Services is no longer interpreted so expansively, but the Inspectional Services Department has formally suggested to the City Council that further guidance be provided by defining precisely the use category.

The *Industrial Park* zone allows all of the significant uses allowed in the Office Park zone, but also allows automobile sales and service, heavy manufacturing, and wholesale warehouse and distribution. The major prohibited uses in the I-P zone area are residential, retail, hospitals, and fast food restaurants. Since the Woburn Zoning Ordinance does not permit use variances, for a residential development to occur in the 82 percent of the superfund area currently within the O-P or I-P zone, the parcel in question would have to be rezoned to S-1, or some other zone which allows for such development. This is precisely what occurred at Cedar and Forbes Street, adjacent to the superfund area, which was rezoned from O-P to S-1 by the Woburn City Council in 2000, in order to accommodate a proposed 205 unit residential rental development called the Jefferson at Washington Crossing. In July, 2003, the City Council rezoned another parcel at 295 Salem Street, just outside of the Wells G&H Area boundary, to R-4, in order to allow for the development of a 100 unit residential development on a the site of a former truck terminal.

The *Business Interstate* zone allows for retail use, including the development of a shopping center. Thus, within the B-I zoned area just north of Route 128, opposite the Wells G&H area, one does find the Woburn Mall. Also allowed in the B-I zone are all types of office uses, and automobile sales and service, the latter being the use most prevalent in the 18 percent of the superfund area within the B-I zone. Prohibited are all types of manufacturing, warehouse and distribution, and residential. Only in the six blocks of the superfund area zoned *Residence-2* is any residential use allowed, and within that zone only one and two family homes, townhouse cluster developments of a similar density, and extended care facilities are allowed. Higher density residential development, and all other types of commercial and industrial development, are prohibited. Given that this residential area is almost fully developed with single and two family



homes, no significant change in land use is likely in this area, provided that the existing zoning remains in place.

Table 2.2 shows the distribution of land uses by land area in the Wells G&H Superfund Area. Retail/Mixed Business is the largest land use, with 28 percent of all land area. Public/Exempt

Table 2.1 Zoning Districts: Allowed Uses						
	O-P	I-P	B-I	R-2		
	Office Park	Industrial Park	Business Interstate	Single, Two Family		
Principal Allowed Uses*	 Office, General, Business & Professional Business Service Hotel Trade Center Hospital Restaurant Except Fast Food Health Club Light Manufacturing Research & Testing 	 Light Manufacturing Heavy Manufacturing Research & Testing Warehouse & Distribution Automobile Sales & Service Office, General, Business & Professional Business Service Restaurant Except Fast Food Printing & Publishing Commercial Greenhouse Hotel Theatre 	 Retail, Shopping Center Office, General, Business & Professional Business Service Automobile Sales & Service Restaurant Including Fast Food Theatre HotelHealth Club 	Single Family, Detached Two Family, Detached Townhouse, Cluster Development Extended Care Facility Single Family, Detached Town Fa		
Principal Prohibited Uses	 Residential Retail, Shopping Center Heavy Manufacturing Theatre Fast Food Restaurant Commercial Greenhouse Printing & Publishing Warehouse & Distribution Automobile Sales & Service 	Residential Retail, Shopping Center Hospital Fast Food Restaurant	 Residential Printing & Publishing Light Manufacturing Heavy Manufacturing Warehouse & Distribution 	 Garden Apartment Elevator Apartment All Commercial & Industrial Uses 		

morades does anowed by right and by special permit.

Table 2.2 Wells G&H Superfund Site Land Area by Land Use					
Land Use	No. of Parcels	Land Area	Percent		
Retail/Mixed Business	18	3,095,211 sf	28.2		
Public/Exempt	5	2,171,030 sf	19.8		
Industrial	6	1,637,220 sf	14.9		
Vacant Land	5	1,373,091 sf	12.5		
Automotive	8	940,059 sf	11.0		
Office	7	1,021,832 sf	9.3		
Residential	46	430,344 sf	3.9		
Recycling	4	317,853 sf	.4		
TOTAL	99	10,986,640 sf	100.0		

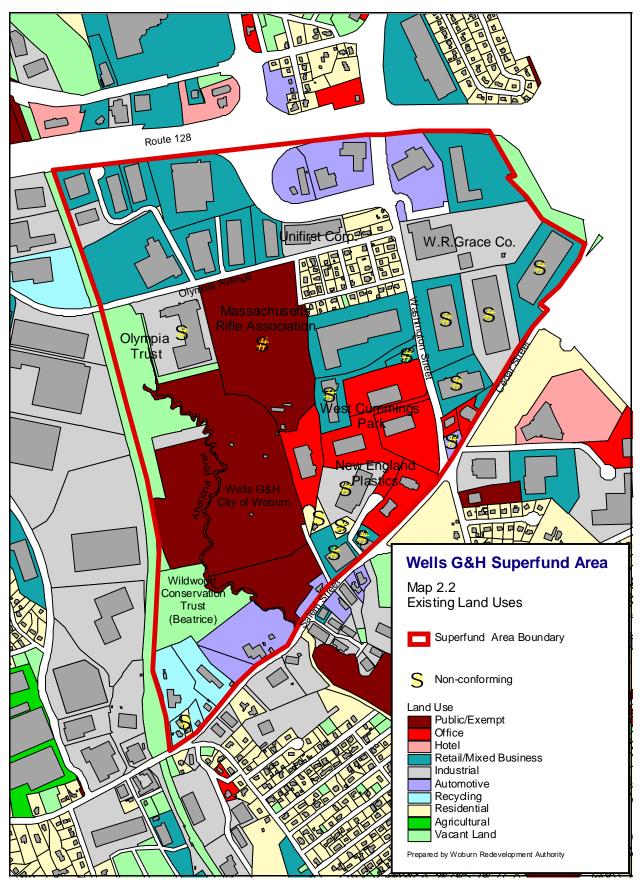
is second, represented by the large City-owned parcels and the Massachusetts Rifle Association land. Office, visually one of the most prominent uses, is sixth in terms of land area. (Note that the industrial category does not include automotive, or material recycling.)

An important question to consider is the extent to which the existing land uses in the study area actually conform to the list of allowed and prohibited land uses found in the ordinance. The map on the following page shows existing land uses in the superfund area, and marks those which are non-conforming as to use. Note that for mapping purposes, several specific types of uses have been aggregated into broader categories; for example, the zoning categories of light manufacturing, heavy manufacturing, and warehouse and distribution are all included in the map category industrial. In the O-P district, light manufacturing is allowed, while heavy manufacturing and warehousing/distribution are not. The map identification of non-conforming uses thus relies on the more specific categories of land use listed in the data files of the Woburn As-

sessing Department, or identified through field surveys.

In general, 17 percent of the parcels in the superfund area, representing approximately 27.5 percent of the land area, are in uses which appear to be non-conforming. (The Cityowned Wells G&H parcels have been excluded from these calculations.) All but one of these non-conforming uses are within the O-P zone, representing approximately 45 percent of the land area within the





zone. The table on page 8 shows the number of parcels and total lot area for each type of non-conforming use. Retail is the single most prevalent non-conforming use (this includes the retail uses which were allowed as "business sales and service"), reflecting the substantial amount of retail use which has developed along the highly traveled Washington Street. However, industrial, residential, and automotive related non-conforming uses are also evident.

It should be noted that the determination in this analysis that any specific use is non-conforming is based upon necessary assumptions regarding the appropriate zoning category which would be applied to specific businesses and developments. In zoning practice, these assumptions are not always clear, and can be subject to interpretation. For example, the Massachusetts Rifle Association was assumed best categorized as a "private membership club," and thus prohibited in the O-P zone. If, however, one could successfully argue that the site was primarily a "physical fitness training and recreation facility," it would be an allowed use. New England Plastics Co., one of the identified "responsible parties," was assumed by this analysis not to meet the definition of light manufacturing above, if for no other reason than the apparent release of toxic materials by the operation into the environment, but this is also certainly arguable.

Prohibited or non-conforming uses can be found within a zoning district for a variety of reasons. By far the most typical is that the specific use predated the current zoning designation. Under both state zoning law and the U.S. Constitution, prior non-conforming uses are automatically "grandfathered" when the zoning ordinance is adopted or amended. That grandfather protection applies to the overall use, not just the current business. Thus, a fast food business selling donuts could move out, and be replaced by a fast food business selling hamburgers; the second business benefits from the same grandfather protection as the first. This protection ceases when a use has been "abandoned," for more than one year. Furthermore, the Massachusetts zoning law, MGL Ch. 40A, also requires that an owner of a property in one non-conforming use must be allowed to change that use to another non-conforming use, provided that the new use is not found by the local special permit granting authority "to be substantially more detrimental" to the surrounding neighborhood.

b. Dimensional Requirements: In addition to the regulation of the types of uses which are allowed on a parcel of land, the zoning ordinance also controls the overall size and layout of construction on any particular parcel. A fundamental and overarching requirement

Table 2.3 Nonconforming Uses in Wells G&H Area					
	Total land area (sf) Non-conforming (sf) Percent Non-conformi		Percent Non-conforming		
O-P	5,727,667	2,580,580	45.05%		
I-P	2,286,810	12,550	.55%		
B-I	1,057,637	0	0		
R-2	377,294	0	0		
Total	12,588,097	2,593,130	20.60%		

found in many ordinances is the "Floor Area Ratio", or F.A.R., defined as the ratio of building area to lot area. An F.A.R. of 1.0 will allow a building with the same amount of floor area as the lot itself. Since in most zoning districts a building cannot cover the entire lot, the only way to obtain the F.A.R. of 1.0 will be to construct a multi-story building. The three commercial zones represented in the superfund area all have a maximum F.A.R. of .5, which means that the floor area of the structures cannot exceed one-half of the lot area. In the Woburn Zoning Ordinance, the F.A.R. is calculated using the "net floor area," defined as the interior space of a building excluding stairwells, elevators, other mechanical areas, and parking structures.



In addition, zoning ordinances also specify certain dimensional and other lot configuration characteristics, including the maximum building height and setback, the percentage of the site which can be occupied by the building "footprint," and the percentage of the site which must be set aside and landscaped as usable open space. (In addition, zoning ordinances also routinely include vehicular parking, circulation, and loading requirements, which will be

reviewed separately.) The table on the following page presents the most important dimensional requirements for the four zones represented in the Wells G&H area. For the R-2 zone, the dimensional requirements differ for each specific allowed residential use; for comparison purposes, the requirements for a new townhouse development are provided here.

The discussion of dimensional requirements for the Wells G&H area is simplified significantly by the fact that the requirements for O-P and I-P, the two prominent zones in the superfund area, are identical. Both require a minimum lot size of 40,000 square feet, minimum street frontage of 125 feet, a building setback requirement of 25 feet on all sides, and a minimum open space/landscape requirement of 30 percent. Both zones allow a maximum building height of seven stories and 80 feet, and neither specifically limits a building ground coverage. Instead, building ground coverage will be effectively limited by the substantial open space requirement, and both the parking requirement dictated by the zoning ordinance, and by market demand.

In the Wells G&H area, some dimensional requirements have greater impact upon site design and build-out than others. In an area where the average parcel is well over 100,000 square feet, the set back requirement is not a critical factor. Setback areas can be landscaped and contribute to the substantial open space requirement, and most of the side and rear yard setback areas can also be dedicated to parking. Within the O-P and I-P districts, 84 percent of the parcels are above the minimum of 40,000 square feet. Given the maximum F.A.R., and current market conditions, the seven story height limit is also not likely a major constricting factor. The significant exception are properties which fall within the residential buffer specified in the footnote found in Section 6.1.8 of the Zoning Ordinance.

Table 2.4 Dimensional Requirements					
	О-Р	I-P	B-I	R-2 (New 2-fam)	
Lot Size Minimum	40,000 sf	40,000 sf	12,000 sf	15,000 sf	
Lot Width Minimum	40 ft	40 ft	40 ft	60 ft	
Street Frontage Minimum	125 ft	125 ft	125 ft	100 ft	
Front Yard Setback	25 ft	25 ft	25 ft	25 ft	
Side Yard Setback	25 ft	25 ft	25 ft	20 ft	
Rear Yard Setback	25 ft	25ft	30 ft	30 ft	
Landscaped Usable Open Space	30%	30%	15%	50%	
Height in Feet	80 ft	80ft	80 ft	35 ft	
Height in Stories	7	7	7	2 1/2	
Building Ground Coverage	-	-	-	25%	
Floor Area Ratio	.50	.50	.50	-	

Structures located in Office park (O-P), Industrial Park (I-P), Industrial Park Two (IP-2) and Business Interstate (B-I)zoning districts, which are within 700 feet of Residential-One (R-1), Residential Two (R-2), and Residential Three (R-3) zoning district boundary lines in the City of Woburn, shall have a maximum height of 35 feet and/or three stories. Any variation exceeding the foregoing height/story limitation shall require the issuance of a special permit by the Special Permit Granting Authority for the proposed use as provided in these ordinances.

In other words, a building located in the three commercial zones found in the Wells G&H area (O-P, I-P, and B-1) which are within 700 feet of an R-1, R-2, or R-3 zone, require a special permit to go above three stories or 35 feet. A significant part of the Wells G&H area falls within that buffer (see pull-out map on page 3). The W.R. Grace property on Washington Street is also primarily within the buffer.

The B-I dimensional requirements differ only slightly from those of the O-P and I-P districts. The most significant differences are a lower minimum lot size of 12,000 square feet, and just half the minimum open space requirement of the other two districts.

A broad evaluation of dimensional non-conformity in the Wells G&H area requires a detailed site plan evaluation beyond the scope of this analysis. However, a review of the F.A.R. for each parcel (based upon gross floor area, not adjusted for the specific space exemptions) shows



that approximately one third of the commercial space in the superfund area is within structures which exceed the .5 maximum. All of this space is located within West Cummings Park, which was made non-conforming when the F.A.R. requirement in the O-P district was reduced by a zoning amendment adopted in April, 2000. The map on the following page depicts the Floor Area Ratios (unadjusted) of each parcel in the study area.

In a practical design situation, the size of the lot, irregularities of shape or topography, the existence of wetlands, or other factors can seriously effect development potential. The office development at 10 Cedar Street provides a good example of a real world situation. When the project was first constructed in 1987, the maximum FAR in the O-P zone was .75, the open space requirement was only 20 percent, and the maximum height of 7 stories applied. However, with a parcel size of 3.75 acres, significantly smaller than W.R. Grace, the impact of the required 25 foot front and rear yard parking setback increased significantly the percentage of area which must be left as open space, in this case to 44 percent. Presumably for both building design and marketing reasons, the developer chose to further limit his building size and exceed the ordinance's parking requirement by 22 percent. The final FAR of the three story development is .37, about one-half of what is theoretically allowed by the ordinance.

c. Parking Requirement: In general, parking requirements are imposed by zoning ordinances by specific use categories, rather than by zone. The parking requirement for the most important uses found within or near the superfund area are as follows:

Residential Two per dwelling unit.

Hotel One per sleeping room, and one for each three employees

on the largest shift.

Retail, bank, or

service establishment One per 200 square feet of net floor area on the ground floor, and one per 350 square feet of net floor area above

or below the ground floor area.

Office (except

medical)

One per 350 square feet of net floor area.

Warehouse, manufacturing

One for each of three employees employed or anticipated to be employed on the largest shift; not less than one per 400 square feet of net floor area in manufacturing, and not

less than one per 800 square feet in warehousing.

Restaurant One for each two patron seats and one for each employee

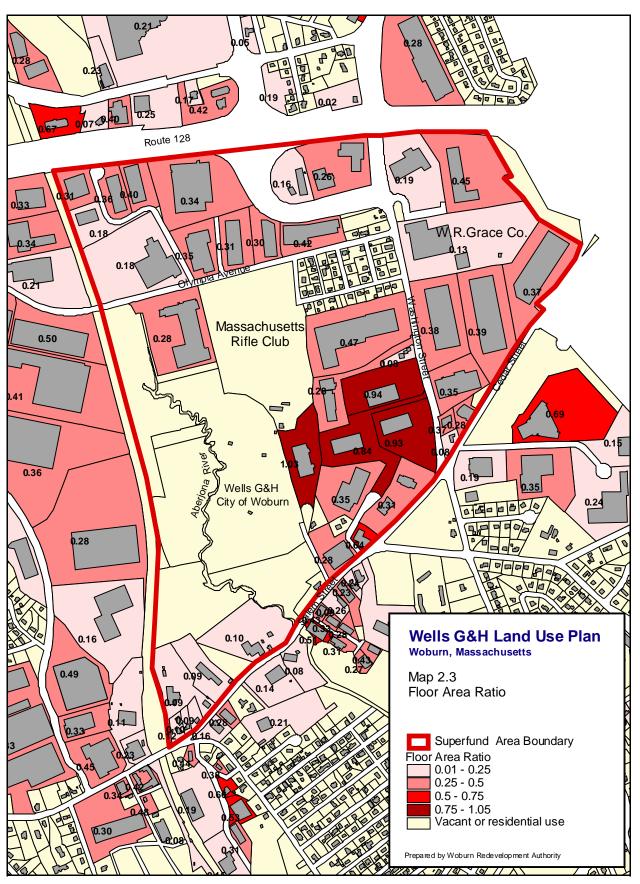
on the largest shift.

As one can see, the parking requirement for a particular use can be based upon the net floor area of the structure (interior area minus exempt utility spaces, etc.), the number of anticipated employees, the number of rooms or seats, or a combination. To simplify, the most critical requirements are one space per 200 square feet of first floor retail or service, one per 350 square feet of office, one per 400 square feet for manufacturing, and one per 800 square feet for warehouse. In most cases, a developer constructing a new commercial project would want at least as many parking spaces than those required above, in order to meet market standards.

In general, the Woburn Zoning Ordinance specifies that parking must be set back at least five feet from any lot line, and no parking can be located in the front yard setback within any industrial, mixed use, office park, or multi-family residential district. This latter requirement applies to all but the B-I zone in the superfund area.

The ordinance requires that a parking space be at least 9 feet by 18 feet (10 ft x 18 ft for retail), which amounts to 162 square feet. Compact car spaces are permitted to be somewhat smaller (8 ft x 16 ft), but are limited to 30 percent of the overall number. Handicapped spaces are wider (12 ft x 18 ft). However, since parking spaces must be accessible "without requiring the moving of any other vehicle," the space itself must be accompanied by driveways and adequate lanes for circulation. Depending upon the parcel, this can increase the amount of area needed per space to anywhere from 300 to 400 square feet per space, depending upon the size and configuration of the lot. In general, the larger and more regular the parcel, the more efficiently the parking lot can be laid out, and the smaller will be the amount of area needed per space. So for office use, as an example, for each 350 square feet of net floor area, there will need to be approximately another 350 square feet of area for parking.

In addition to the parking requirement, the ordinance also requires a minimum number of offstreet loading bays for a commercial building, based upon the size and use of the structure. A loading bay must be at least ten feet wide and 35 feet in length, and cannot be located at the front of the structure.



- **2. Wetlands and Rivers Protection:** The above discussion summarizes how the Woburn Zoning Ordinance controls both the use, overall density, and layout of new development in the Wells G&H area. Other regulatory controls, of course, also effect the development or redevelopment potential of a parcel. Local subdivision control, administered by the Planning Board, dictates the proper layout of rights-of-way, utilities, and lots when a parcel is to be divided into multiple lots. Subdivision control is not likely to play a major role in the redevelopment of the priority parcels in the Wells G&H area, and is not reviewed here. A critically important factor, however, is the impact on certain parcels of regulations under the Wetlands Protection Act, and the Rivers Protection Act; at the local level, authority for implementing and enforcing the regulations is the responsibility of the local Conservation Commission. The impact of these two statutes is reviewed in detail below:
- a. The Wetlands Act: In today's development environment, the regulations which control and regulate the impact of development upon natural wetlands and similar natural resources often rival zoning and subdivision control in importance. The central statute is the Massachusetts Wetlands Act, M.G.L. Chapter 131, Section 40. The Wetlands Act applies to all freshwater or coastal wetlands, ponds, rivers, streams and banks, and areas subject to flooding. In general, developments proposed within one of these protected "resource areas" or within a 100 foot "buffer zone" fall within the jurisdiction of the statute. The stated purposes of the Act are to protect the water supply and ground water, to prevent pollution and flooding, and to protect wildlife habitat, shellfish lands, and fisheries from damage.



The Massachusetts Wetlands Act does not absolutely prohibit development within a wetland or other protected resource area, but alterations within the resource areas are severely restricted. First, the proponent must establish that there is no feasible alternative. Second, any alteration over 500 square feet requires that the proponent replicate the wetland area in another location, and alterations effecting over 5,000 square are essentially prohibited.

Day to day responsibility for the enforcement of the Wetlands Act falls to the local Conservation Commission. A developer or other party proposing alterations within a protected resource area or within the buffer zone must apply to the Commission for a permit. Permits are usually issued with an "Order of Conditions," which stipulates the steps the proponent is required to take to minimize the impact of any alterations. Within the buffer zone, this often involves taking steps to ensure that the natural buffer of ground cover vegetation which protects the wetland from the effects of erosion is able to reestablish itself after construction is completed. Thus, the Conservation Commission will often dictate the proposed grading and site drainage, and require the installation of a siltation barrier. The typical temporary siltation barrier, which usually employs filter fabric, hay bales, and snow fencing to hold back soil erosion, has become a common sight in Woburn and other suburban Massachusetts communities.

Parties who disagree with the decision of the local Conservation Commission can appeal to the Massachusetts Department of Environmental Protection for a Superceding Determination of Applicability or Order of Conditions, or ultimately, for a variance from the Act's requirements. The latter was done successfully by the Massachusetts Highway Department for the construction of the new I-93 Commerce Way Interchange.

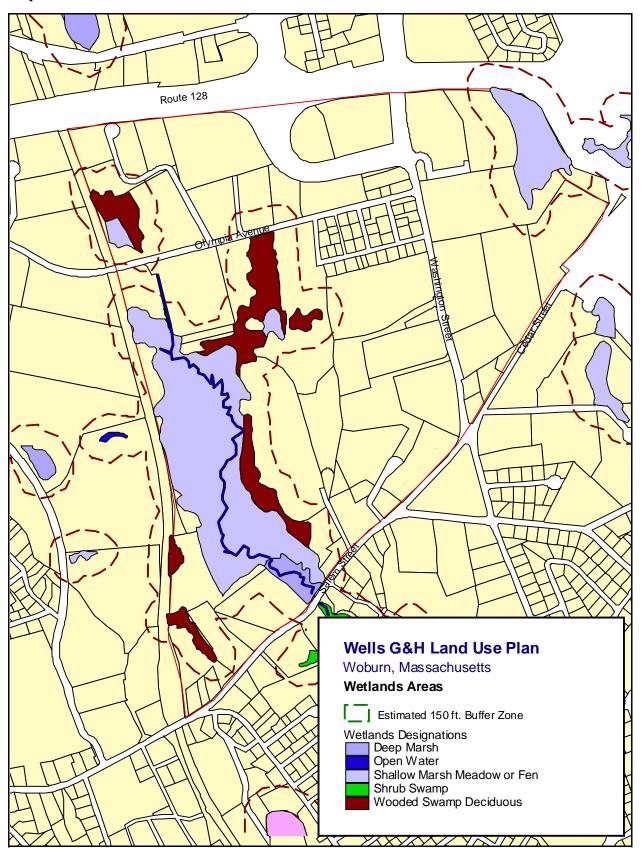
b. The Woburn Wetlands Ordinance: In addition to the Wetlands Act, the City of Woburn also has its own Wetlands Ordinance, adopted in 1985. The Woburn Ordinance decrees a wider, 150 foot buffer zone, and establishes a fine of \$300 for any violation. Each day of non-compliance can be treated as a separate violation, so the size of the fine can quickly become a serious issue for a small property owner. The Woburn Conservation Commission has also adopted a policy which establishes a 15 foot "no disturb" zone around protected resource areas:

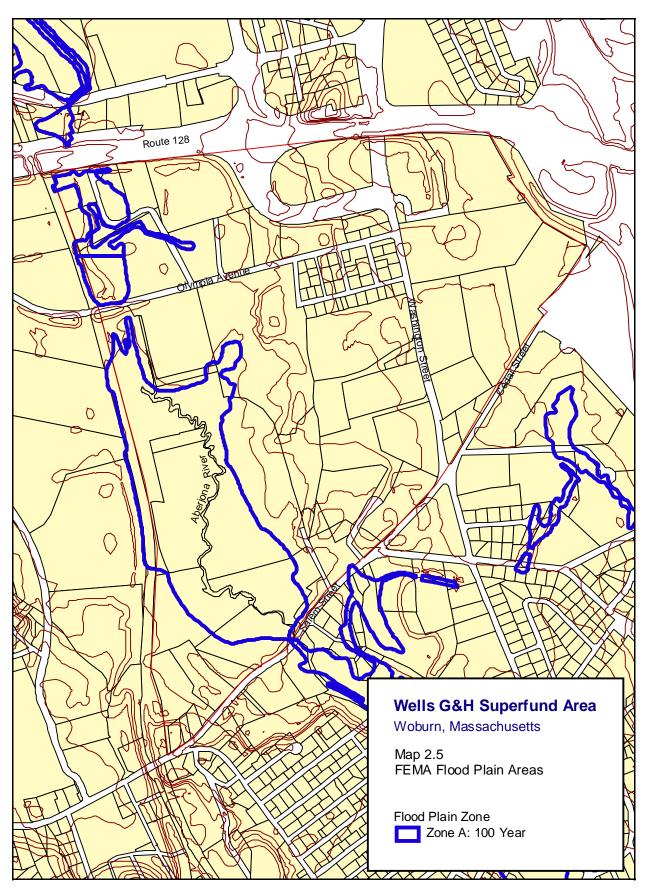
The Conservation Commission will expect proposals to locate no alteration or disturbance of land closer than 15 feet to a wetland boundary. Special justification will be required for any proposal that seeks a lesser distance. Applications for lesser distances will be required to show in detail that no damage occurs to the adjacent wetland.

In practice, the Conservation Commission enforces the Wetlands Act and the local Wetlands Ordinance in tandem, with one permit and Order of Conditions covering both statutes. In practice, alterations within the borders of a wetland or other resource area are generally prohibited, and their occurrence is rare. Alterations within the established buffer zone are more typical, but are carefully scrutinized.

c. The Rivers Protection Act: In 1996, the Massachusetts Legislature amended the Wetlands Act statute by essentially adding a 200 foot buffer zone along rivers and streams, the

Map 2.4







"riverfront area," to the list of resource areas protected by the Act. Many of the marshes and flood plains found along the edges of a waterways were already under the jurisdiction of the Act. What was significant was the addition of a considerable amount of upland area, previously unregulated by the Wetlands Act, and in many areas already developed with the introduction of houses, lawns, commercial buildings, and parking.

However, given that the Aberjona River in the Wells G&H Area is fairly surrounded by wetlands and floodplains, the additional impact of the riverfront designation does not appear to be significant.

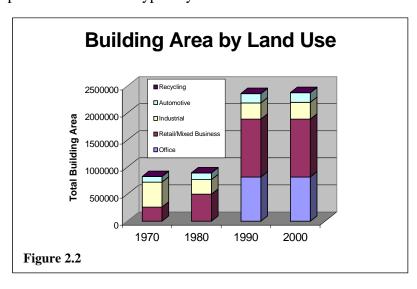
- d. Summary: The permitting process stipulated by the Wetlands Act has not yet had a significant impact on most of the commercial development in the Wells G&H area. The larger scale office and retail developments are located generally along well-traveled Washington Street, which is for the most part well outside the protected resource areas, and the various buffers proscribed by statute and local ordinance. A notable exception is the Olympia Realty Trust property at 60 Mishawum Road, which recently needed a wetlands permit from the Conservation Commission for the expansion of the site's parking and loading facilities. Approximately one-third of the W.R. Grace property is made up of wetland, located at the rear of the property, which will substantially impact the ultimate build-out for that priority property. The proposal put forward in this plan to develop the Wells G&H property as a passive conservation area will also be effected by the Wetlands Act and regulations, as these plans ultimately include some minimal alterations within the resource areas themselves. In the area of the Southwest Properties, the former Aberjona Auto Parts property at 280 Salem Street is also effected by the requirements of the Rivers Protection Act, as a substantial portion of that property is located within the Aberjona riverway.
- 3. Development Trends in the Wells G&H Area: In order to historically quantify the changes in land use and development in the Wells G&H area, Inspectional Services building permit files were reviewed by the WRA for all of the commercial parcels in the Wells G&H Superfund Area. This represents approximately 99 parcels, which currently contain nearly 2.4

million square feet of space of land area.

Building department files in general are complete from about 1970, and so the analysis was basically restricted to the last three full decades. The graph below shows by decade the total amount of commercial space by use category, in place at the beginning of each decade, representing a total of four data sets, including the beginning of the current decade. It is obvious that the significant boom in construction occurred during the 80s, when the square footage jumped by 160 percent. This is the decade when much of West Cummings Park was completed and leased, including both the multi-story general office space within the complex, and the one-story mixed-business space. As a result of this new office and retail development, more traditional industrial uses, essentially manufacturing, warehousing, and distribution, have become significantly less important, moving from over half of the space in 1970, to approximately 16 percent of all space in 2000.

Since earlier building records are not systematically available, it is impossible to quantify the square footages for uses which were in place before 1970, but a few observations are possible from the limited information available within the building department files. A number of the redeveloped parcels along both Washington Street and Cedar Street were assemblages of two or more single family house lots. Significant portions of both Cummings Park on the easterly side of Washington Street, and West Cummings Park on the opposite side, were home to large greenhouse operations. The last vestige of this once prominent use is still to be found nearby at 200 Wildwood Avenue. A number of parcels which were in industrial use in 1970 were converted over that decade to a more flexible retail/mixed business use; which is reflected in the initial drop in industrial space by 1980. For the most part, suitable industrial properties throughout the Wells G&H area were not actually torn down to make room for office or other development; instead, adaptive reuse seems to have been the norm instead, when a readily adaptable building was already in place. Conversions typically created individual modules of

lease space between 5,000 to 10,000 square feet, each with its own entry and loading. A few new buildings were also constructed from inception as multiple tenant, mixed-use buildings, on sites which did not already have a suitable existing structure. The specific uses within these mixedbusiness buildings vary widely, and include warehouse, selfstorage, retail and discount retail, office, manufacturing, indoor recreation, and even child care.



Perhaps not surprisingly, the construction boom within in the Wells G&H area peaked during the 80s, and there has been little additional commercial development within the last decade.

Furthermore, the FAR of 1.0 allowed during the 80s under the Woburn Zoning Ordinance has since been reduced to .5 FAR, which significantly effects the potential build-out and return which could be obtained from the redevelopment of an underutilized parcel. Thus, most of the development in the 90s occurred through additions to existing buildings, rather than new development, and this trend has continued into the new century. Based upon these trends, it would appear that a fairly low Floor Area Ratio, perhaps under .15, could be safely characterized as underutilized in the current development climate, and into the foreseeable future. Only the vacant W.R. Grace property, the Aberjona Auto Parts property, and the other Southwest Properties fall within this loose criteria.

The redevelopment of all of the properties mentioned above has clearly been complicated by the presence of significant soil contamination, and related environmental issues. As a result, the Advisory Committee chose to identify the first two properties, along with the City-owned Wells G&H property itself, as the priority sites for further analysis under this Superfund Pilot, hoping that the work undertaken and resulting recommendations could provide a catalyst for productive reuse. In the upcoming sections, the results of that extensive effort will be provided in further detail.